MW & BC Funded Projects
1975-76

TITLE: Winter Wheat Improvement

INSTITUTION: Montana State University

DEPARTMENT: Plant & Soil Sciences

RESEARCHERS: Greg Kushnak, D. E. Baldridge, Hollis Spitler, Rick Hrada, Jerald Bergman, Vern Stewart

AMOUNT FUNDED: $31,000.00

OBJECTIVES:
1) Shatter resistant 'Cheyenne'

2) Evaluate 'Crest' line row components

3) Genetic male sterility

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TITLE: Resistance and/or tolerance of wheat to leaf and head blotch diseases (controlling wheat leaf spot diseases).

INSTITUTION: Montana State University

DEPARTMENT: Plant Pathology

RESEARCHERS: J. F. Brown

AMOUNT FUNDED: $6,300.00

OBJECTIVES:
1) Increase the quality and quantity of Montana wheats by holding losses from leaf spots to a minimum.

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TITLE: Development of control measures for soil-borne diseases of wheat

INSTITUTION: Montana State University

DEPARTMENT: Plant Pathology

RESEARCHERS: Don Mathre

AMOUNT FUNDED: $13,725.00

OBJECTIVES:
1) To develop effective control measures for soil-borne diseases of wheat.

$13,725.00

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TITLE: To develop cultural methods suitable for the continuous cropping of the drylands of Montana

INSTITUTION: Montana State University

DEPARTMENT: Research Centers/Art Dubbs

RESEARCHES: Various

AMOUNT FUNDED: $22,000.00

OBJECTIVES:
1) The development of continuous cropping systems to replace the present fallow system is a complex problem. Many unforeseeable conditions arise. Less time is available for seedbed preparation. More land will have to be seeded and harvested annually. Weeds and other pests will probably be more troublesome. The fertility moisture inventory, and plant population relationships will be more critical. The machinery, especially for seeding, will require modification. As seasons vary from year to year, more flexibility in respect to crop selection, methods of tillage, and methods of harvest or crop utilization will be required.

2) In view of the above problems, it becomes nearly impossible for any one Research Center to conduct research on all facets of any changes. Thus, each Center will work on some phase of the problem with the hope that the farmers will be able to put together a system of continuous cropping that will be best suited for his conditions.

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TITLE: Correlation of crop response to fertilizer additives with soil properties, soil test results, and climatic factors

INSTITUTION: Montana State University

DEPARTMENT: Plant & Soil Sciences

RESEARCHERS: Jim Simms

AMOUNT FUNDED: $21,100.00

OBJECTIVES:

1) Devise methods to help grain growers cope with the present nitrogen fertilizer situation.

   a) Develop a system to predict the amount of available nitrogen released from the soil organic matter during the fallow period and during the cropping period.

   b) Evaluate the suitability of various forms of urea (granular, S coated, solutions) and ammoniacal fertilizers as substitutes for ammonium nitrate under Montana conditions.

   c) Differentiate, on the basis of soil properties and climatic factors, those soils on which sweetclover and other legumes can be used as partial sources of N for dryland grain production.

2) Adapt my new system for recommending N fertilizer for winter wheat to spring wheat and barley.

3) Determine the influence of nitrogen, phosphorus and potassium alone and in combinations applied at tillering and heading on the amino-acid distribution in winter wheat, spring wheat and barley (analysis of grain on hand from 1972, 1973, and 1974).

4) Determine the feed quality and baking quality of the above mentioned grain.

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TITLE: Control of Rust Diseases of Wheat

INSTITUTION: Montana State University

DEPARTMENT: Plant Pathology

RESEARCHERS: Joe Kopensky

AMOUNT FUNDED: $12,950.00

OBJECTIVES:

1) Identify sources of resistance to stem rust and stripe rust of wheat.

2) Identify genes for resistance and their action in wheat lines considered for commercial release.

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TITLE: Target prices and Cost of Production

INSTITUTION: Montana State University

DEPARTMENT: Agricultural Economics

RESEARCHERS: Dick McConnen

AMOUNT FUNDED: $11,050.00

OBJECTIVES:

1) Monitor the ERS study of grain cost of production.

2) Update Montana cost of production studies.

3) Evaluate survival potential of Montana farm units in alternative capital equity positions under alternative target prices.